



# National Voluntary Laboratory Accreditation Program



## SCOPE OF ACCREDITATION TO ISO/IEC 17025:1999

### State of Virginia Metrology Lab

600 North 5th Street, Room 210

Richmond, VA 23219

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### CALIBRATION LABORATORIES

NVLAP LAB CODE 105007-0

#### DIMENSIONAL

**NVLAP Code:** 20/D13  
Survey Rods and Tapes

<b>Range</b>	<b>Best Uncertainty (<math>\pm</math>) in inches <sup>note 1</sup></b>	<b>Remarks</b>
2 ft to 10 ft	0.0073	Metal Tapes (Bench Method)
11 ft to 25 ft	0.0081	Metal Tapes (Bench Method)
26 ft to 50 ft	0.0092	Metal Tapes (Bench Method)
51 ft to 75 ft	0.011	Metal Tapes (Bench Method)
76 ft to 100 ft	0.012	Metal Tapes (Bench Method)
1 inch to 18 inches	0.005	Rigid Rules

#### TIME AND FREQUENCY

**NVLAP Code:** 20/F01  
Frequency

<b>Range in Hz</b>	<b>Best Uncertainty (<math>\pm</math>) <sup>note 1</sup></b>	<b>Remarks</b>
1000 to 10 000	0.028 %	Tuning forks at frequencies used in law enforcement.

2006-10-01 through 2007-09-30

Effective dates

For the National Institute of Standards and Technology



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## CALIBRATION LABORATORIES

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### MECHANICAL

**NVLAP Code:** 20/M08

Mass

<b>Range</b>	<b>Best Uncertainty (<math>\pm</math>)<sup>note 1</sup></b>	<b>Remarks</b>
30 kg	17 mg	Echelon II
20 kg	16 mg	Echelon II
10 kg	14 mg	Echelon II
5 kg	3.6 mg	Echelon II
3 kg	3.6 mg	Echelon II
2 kg	0.75 mg	Echelon II
1 kg	0.23 mg	Echelon II
500 g	0.23 mg	Echelon II
300 g	0.22 mg	Echelon II
200 g	0.22 mg	Echelon II
100 g	0.037 mg	Echelon II
50 g	0.034 mg	Echelon II
30 g	0.034 mg	Echelon II
20 g	0.011 mg	Echelon II
10 g	0.011 mg	Echelon II
5 g	0.011 mg	Echelon II
3 g	0.011 mg	Echelon II
2 g	0.011 mg	Echelon II
1 g	0.006 mg	Echelon II
500 mg	0.0057 mg	Echelon II
300 mg	0.0057 mg	Echelon II
200 mg	0.0057 mg	Echelon II
100 mg	0.0078 mg	Echelon II
50 mg	0.0078 mg	Echelon II
30 mg	0.0078 mg	Echelon II
20 mg	0.0078 mg	Echelon II
10 mg	0.0084 mg	Echelon II
5 mg	0.0098 mg	Echelon II

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3 mg	0.0098 mg	Echelon II
2 mg	0.0098 mg	Echelon II
1 mg	0.012 mg	Echelon II
25 kg	0.15 g	Echelon III
20 kg	0.17 g	Echelon III
10 kg	70 mg	Echelon III
5 kg	9.7 mg	Echelon III
2 kg	3.9 mg	Echelon III
1 kg	1.8 mg	Echelon III
500 g	1.3 mg	Echelon III
300 g	1.2 mg	Echelon III
200 g	1.1 mg	Echelon III
100 g	0.20 mg	Echelon III
50 g	0.15 mg	Echelon III
30 g	0.14 mg	Echelon III
20 g	0.13 mg	Echelon III
10 g	0.13 mg	Echelon III
5 g	0.13 mg	Echelon III
3 g	0.13 mg	Echelon III
2 g	0.13 mg	Echelon III
1 g	0.13 mg	Echelon III
500 mg	0.033 mg	Echelon III
300 mg	0.033 mg	Echelon III
200 mg	0.033 mg	Echelon III
100 mg	0.031 mg	Echelon III
50 mg	0.031 mg	Echelon III
30 mg	0.031 mg	Echelon III
20 mg	0.031 mg	Echelon III
10 mg	0.030 mg	Echelon III
5 mg	0.031 mg	Echelon III
3 mg	0.030 mg	Echelon III
2 mg	0.030 mg	Echelon III

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## CALIBRATION LABORATORIES

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1 mg	0.030 mg	Echelon III
Mass - Avoirdupois		
6000 lb	0.073 lbs	Echelon III
5000 lb	0.064 lbs	Echelon III
4000 lb	0.057 lbs	Echelon III
3000 lb	0.091 lbs	Echelon III
2000 lb	0.088 lbs	Echelon III
1000 lb	0.008 lbs	Echelon III
500 lb	0.004 lbs	Echelon III
50 lb	0.20 mg	Echelon III
25 lb	0.11 mg	Echelon III
20 lb	0.11 mg	Echelon III
10 lb	17 mg	Echelon III
5 lb	6.9 mg	Echelon III
3 lb	4.0 mg	Echelon III
2 lb	2.0 mg	Echelon III
1 lb	0.90 mg	Echelon III
0.5 lb	0.64 mg	Echelon III
0.3 lb	0.69 mg	Echelon III
0.2 lb	0.67 mg	Echelon III
0.1 lb	0.66 mg	Echelon III
0.05 lb	0.14 mg	Echelon III
0.03 lb	0.14 mg	Echelon III
0.02 lb	0.13 mg	Echelon III
0.01 lb	0.13 mg	Echelon III
0.005 lb	0.13 mg	Echelon III
0.003 lb	0.13 mg	Echelon III
0.002 lb	0.13 mg	Echelon III
0.001 lb	0.13 mg	Echelon III

**NVLAP Code:** 20/M12

Volume and Density

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## CALIBRATION LABORATORIES

NVLAP LAB CODE 105007-0

<b>Range</b>	<b>Best Uncertainty (<math>\pm</math>)<sup>note 1</sup></b>	<b>Remarks</b>
2000 gallons	121 in <sup>3</sup>	Volume Transfer
1500 gallons	96 in <sup>3</sup>	Volume Transfer
1000 gallons	84 in <sup>3</sup>	Volume Transfer
500 gallons	42 in <sup>3</sup>	Volume Transfer
200 gallons	17 in <sup>3</sup>	Volume Transfer
100 gallons	8.4 in <sup>3</sup>	Volume Transfer
50 gallons	7.4 in <sup>3</sup>	Volume Transfer
5 gallons	0.31 in <sup>3</sup>	Volume Transfer
2 Liter	0.46 ml	Volume Transfer
1 Liter	0.25 ml	Volume Transfer
500 ml	0.23 ml	Volume Transfer
200 ml	0.095 ml	Volume Transfer
100 ml	0.082 ml	Volume Transfer
50 ml	0.076 ml	Volume Transfer
10 ml	0.074 ml	Volume Transfer
1.0 gallon	13 minim	Volume Transfer
0.5 gallon	8.8 minim	Volume Transfer
1.0 quart	4.9 minim	Volume Transfer
1.0 pint	3.1 minim	Volume Transfer
0.5 pint	3.2 minim	Volume Transfer
1.0 gill	3.1 minim	Volume Transfer
1.0 fluid ounce	1.0 minim	Volume Transfer

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## CALIBRATION LABORATORIES

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### THERMODYNAMICS

**NVLAP Code:** 20/T03  
Laboratory Thermometers

<b>Range in °C</b>	<b>Best Uncertainty (<math>\pm</math>)<sup>note 1</sup></b>	<b>Remarks</b>
-8 to 32	0.12 °C	Liquid in Glass
33 to 55	0.11 °C	Liquid in Glass
56 to 80	0.14 °C	Liquid in Glass
81 to 105	0.08 °C	Liquid in Glass

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1. Represents an expanded uncertainty using a coverage factor,  $k = 2$ , at an approximate level of confidence of 95 %.

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